

## **RAW SEQUENCE LISTING**

**The Biotechnology Systems Branch of the Scientific and Technical  
Information Center (STIC) no errors detected.**

Application Serial Number: 10/560,726  
Source: ITWP  
Date Processed by STIC: 4-14-06

***ENTERED***



IFWP

**RAW SEQUENCE LISTING**  
**PATENT APPLICATION:** US/10/560,726

**DATE:** 04/14/2006  
**TIME:** 10:45:46

**Input Set :** A:\21788wo.ST25.txt  
**Output Set:** N:\CRF4\04142006\J560726.raw

3 <110> APPLICANT: DSM IP Assets B.V.  
 5 <120> TITLE OF INVENTION: Feedback-resistant mevalonate kinases  
 7 <130> FILE REFERENCE: Case 21788  
 C--> 9 <140> CURRENT APPLICATION NUMBER: US/10/560,726  
 C--> 9 <141> CURRENT FILING DATE: 2005-12-08  
 9 <150> PRIOR APPLICATION NUMBER: EP 03012294.9  
 10 <151> PRIOR FILING DATE: 2003-06-12  
 12 <160> NUMBER OF SEQ ID NOS: 33  
 14 <170> SOFTWARE: PatentIn version 3.2  
 16 <210> SEQ ID NO: 1  
 17 <211> LENGTH: 378  
 18 <212> TYPE: PRT  
 19 <213> ORGANISM: Paracoccus zeaxanthinifaciens  
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 24 1 5 10 15  
 27 Ile Leu Ser Gly Glu His Ser Val Leu Tyr Gly Ala Pro Ala Leu Ala  
 28 20 25 30  
 31 Met Ala Ile Ala Arg Tyr Thr Glu Val Trp Phe Thr Pro Leu Gly Ile  
 32 35 40 45  
 35 Gly Glu Gly Ile Arg Thr Thr Phe Ala Asn Leu Ser Gly Gly Ala Thr  
 36 50 55 60  
 39 Tyr Ser Leu Lys Leu Leu Ser Gly Phe Lys Ser Arg Leu Asp Arg Arg  
 40 65 70 75 80  
 43 Phe Glu Gln Phe Leu Asn Gly Asp Leu Lys Val His Lys Val Leu Thr  
 44 85 90 95  
 47 His Pro Asp Asp Leu Ala Val Tyr Ala Leu Ala Ser Leu Leu His Asp  
 48 100 105 110  
 51 Lys Pro Pro Gly Thr Ala Ala Met Pro Gly Ile Gly Ala Met His His  
 52 115 120 125  
 55 Leu Pro Arg Pro Gly Glu Leu Gly Ser Arg Thr Glu Leu Pro Ile Gly  
 56 130 135 140  
 59 Ala Gly Met Gly Ser Ser Ala Ala Ile Val Ala Ala Thr Thr Val Leu  
 60 145 150 155 160  
 63 Phe Glu Thr Leu Leu Asp Arg Pro Lys Thr Pro Glu Gln Arg Phe Asp  
 64 165 170 175  
 67 Arg Val Arg Phe Cys Glu Arg Leu Lys His Gly Lys Ala Gly Pro Ile  
 68 180 185 190  
 71 Asp Ala Ala Ser Val Val Arg Gly Gly Leu Val Arg Val Gly Gly Asn  
 72 195 200 205  
 75 Gly Pro Gly Ser Ile Ser Ser Phe Asp Leu Pro Glu Asp His Asp Leu  
 76 210 215 220  
 79 Val Ala Gly Arg Gly Trp Tyr Trp Val Leu His Gly Arg Pro Val Ser

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80	225	230	235	240
83	Gly	Thr	Gly	Glu
	Cys	Val	Ser	Ala
84		Val	Ala	Ala
87	Ala	Ala	Leu	Trp
	Asp	Ala	Phe	Ala
88		Val	Cys	Thr
91	Ala	Leu	Leu	Ser
	Gly	Gly	Ser	Pro
92		Pro	Asp	Ala
95	Ala	Ala	Ile	Thr
	Gly	Gly	Asn	Gln
96		Asn	Gln	Gln
99	Val	Ala	Gln	Ile
	Glu	Glu	Gly	Gly
100		Ala	Ala	Lys
103	Gly	Ser	Val	Arg
	Gly	Asp	His	Gly
104		Gly	Gly	Ala
107	Asp	Ala	Gln	Ala
	Met	Ala	Ser	Val
108		Met	Ala	Arg
111	Trp	Ala	Pro	Leu
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112		Ser	Ser	Arg
115	Pro	Ala	Gln	Pro
	Pro	Leu	Pro	Gly
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122	<213>	ORGANISM:	homo sapiens	
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130	His	Gly	Glu	His
	Ala	Val	Val	Val
131		His	Gly	Lys
134	Leu	Asn	Leu	Arg
	Thr	Phe	Leu	Arg
135		Leu	Gln	Pro
138	Val	Asp	Leu	Ser
	Leu	Pro	Asn	Ile
139		Asn	Ile	Gly
142	Ala	Arg	Leu	Gln
	Ser	Leu	Asp	Ser
143		Thr	Phe	Leu
146	Thr	Thr	Pro	Thr
	Ser	Glu	Gln	Val
147		Val	Glu	Lys
150	Leu	Pro	Asp	Asp
	Cys	Ala	Val	Thr
151		Thr	Glu	Arg
154	Leu	Tyr	Leu	Tyr
	Leu	Ser	Ile	Cys
155		Arg	Cys	Gln
158	Leu	Asp	Ile	Val
	Val	Val	Trp	Ser
159		Trp	Ser	Glu
162	Ser	Ser	Ala	Ala
	Tyr	Ser	Tyr	Ser
163		Val	Cys	Leu
166	Cys	Glu	Glu	Ile
	Pro	Asn	Pro	Leu
167		Leu	Lys	Asp
170	Trp	Thr	Lys	Glu
	Glu	Asp	Leu	Glu
171		Leu	Ile	Asn
174	Glu	Arg	Met	Ile
	Asn	His	Gly	Asn
	Pro	Ser	Gly	Val
	Asp	Asn	Asn	Ala
	Asn	Ala	Val	Ser

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273	Cys	Glu	Glu	Val	Ser	Asn	Pro	Leu	Lys	Asp	Gly	Val	Ser	Val	Ser	Arg
274				165				170						175		
277	Trp	Pro	Glu	Glu	Asp	Leu	Lys	Ser	Ile	Asn	Lys	Trp	Ala	Phe	Glu	Gly
278					180				185					190		
281	Glu	Arg	Val	Ile	His	Gly	Asn	Pro	Ser	Gly	Val	Asp	Asn	Ala	Val	Ser
282					195			200					205			
285	Thr	Trp	Gly	Gly	Ala	Leu	Arg	Phe	Gln	Gln	Gly	Thr	Met	Ser	Ser	Leu
286					210			215					220			
289	Lys	Ser	Leu	Pro	Ser	Leu	Gln	Ile	Leu	Leu	Thr	Asn	Thr	Lys	Val	Pro
290	225					230				235				240		
293	Arg	Ser	Thr	Lys	Ala	Leu	Val	Ala	Ala	Val	Arg	Ser	Arg	Leu	Thr	Lys
294						245				250				255		
297	Phe	Pro	Glu	Ile	Val	Ala	Pro	Leu	Leu	Thr	Ser	Ile	Asp	Ala	Ile	Ser
298						260			265				270			
301	Leu	Glu	Cys	Glu	Arg	Val	Leu	Gly	Glu	Met	Val	Ala	Ala	Pro	Val	Pro
302						275			280				285			
305	Glu	Gln	Tyr	Leu	Val	Leu	Glu	Glu	Leu	Ile	Asp	Met	Asn	Gln	His	His
306						290			295				300			
309	Leu	Asn	Ala	Leu	Gly	Val	Gly	His	Asn	Ser	Leu	Asp	Gln	Leu	Cys	Gln
310	305					310				315				320		
313	Val	Thr	Ala	Ala	His	Gly	Leu	His	Ser	Lys	Leu	Thr	Gly	Ala	Gly	Gly
314						325				330				335		
317	Gly	Gly	Cys	Gly	Ile	Thr	Leu	Leu	Lys	Pro	Gly	Leu	Glu	Gln	Ala	Thr
318						340			345				350			
321	Val	Glu	Ala	Ala	Lys	Gln	Ala	Leu	Thr	Ser	Cys	Gly	Phe	Asp	Cys	Trp
322						355			360				365			
325	Glu	Thr	Ser	Ile	Gly	Ala	Pro	Gly	Val	Ser	Thr	His	Ser	Ala	Ala	Ala
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330	385					390				395						
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341	1				5				10				15			
344	His	Gly	Glu	His	Ala	Val	Val	His	Gly	Lys	Val	Ala	Leu	Ala	Val	Ala
345						20			25				30			
348	Leu	Asn	Leu	Arg	Thr	Phe	Leu	Val	Leu	Arg	Pro	Gln	Ser	Asn	Gly	Lys
349						35			40				45			
352	Val	Ser	Leu	Asn	Leu	Pro	Asn	Val	Gly	Ile	Lys	Gln	Val	Trp	Asp	Val
353						50			55				60			
356	Ala	Thr	Leu	Gln	Leu	Leu	Asp	Thr	Gly	Phe	Leu	Glu	Gln	Gly	Asp	Val
357	65					70			75				80			
360	Pro	Ala	Pro	Thr	Leu	Glu	Gln	Leu	Glu	Lys	Leu	Lys	Lys	Val	Ala	Gly
361						85			90				95			
364	Leu	Pro	Arg	Asp	Cys	Val	Gly	Asn	Glu	Gly	Leu	Ser	Leu	Leu	Ala	Phe

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365	100	105	110
368	Leu Tyr Leu Tyr Leu Ala Ile Cys Arg Lys Gln Arg Thr Leu Pro Ser		
369	115	120	125
372	Leu Asp Ile Met Val Trp Ser Glu Leu Pro Pro Gly Ala Gly Leu Gly		
373	130	135	140
376	Ser Ser Ala Ala Tyr Ser Val Cys Val Ala Ala Leu Leu Thr Ala		
377	145	150	155
380	Cys Glu Glu Val Thr Asn Pro Leu Lys Asp Arg Gly Ser Ile Gly Ser		
381	165	170	175
384	Trp Pro Glu Glu Asp Leu Lys Ser Ile Asn Lys Trp Ala Tyr Glu Gly		
385	180	185	190
388	Glu Arg Val Ile His Gly Asn Pro Ser Gly Val Asp Asn Ser Val Ser		
389	195	200	205
392	Thr Trp Gly Gly Ala Leu Arg Tyr Gln Gln Gly Lys Met Ser Ser Leu		
393	210	215	220
396	Lys Arg Leu Pro Ala Leu Gln Ile Leu Leu Thr Asn Thr Lys Val Pro		
397	225	230	235
400	Arg Ser Thr Lys Ala Leu Val Ala Gly Val Arg Ser Arg Leu Ile Lys		
401	245	250	255
404	Phe Pro Glu Ile Met Ala Pro Leu Leu Thr Ser Ile Asp Ala Ile Ser		
405	260	265	270
408	Leu Glu Cys Glu Arg Val Leu Gly Glu Met Ala Ala Ala Pro Val Pro		
409	275	280	285
412	Glu Gln Tyr Leu Val Leu Glu Glu Leu Met Asp Met Asn Gln His His		
413	290	295	300
416	Leu Asn Ala Leu Gly Val Gly His Ala Ser Leu Asp Gln Leu Cys Gln		
417	305	310	315
420	Val Thr Ala Ala His Gly Leu His Ser Lys Leu Thr Gly Ala Gly Gly		
421	325	330	335
424	Gly Gly Cys Gly Ile Thr Leu Leu Lys Pro Gly Leu Glu Arg Ala Lys		
425	340	345	350
428	Val Glu Ala Ala Lys Gln Ala Leu Thr Gly Cys Gly Phe Asp Cys Trp		
429	355	360	365
432	Glu Thr Ser Ile Gly Ala Pro Gly Val Ser Met His Ser Ala Thr Ser		
433	370	375	380
436	Ile Glu Asp Pro Val Arg Gln Ala Leu Gly Leu		
437	385	390	395
440	<210> SEQ ID NO: 5		
441	<211> LENGTH: 378		
442	<212> TYPE: PRT		
443	<213> ORGANISM: Arabidopsis thaliana		
445	<400> SEQUENCE: 5		
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451	His Ala Val Val His Gly Ser Thr Ala Val Ala Ala Ile Asp Leu		
452	20	25	30
455	Tyr Thr Tyr Val Thr Leu Arg Phe Pro Leu Pro Ser Ala Glu Asn Asn		
456	35	40	45
459	Asp Arg Leu Thr Leu Gln Leu Lys Asp Ile Ser Leu Glu Phe Ser Trp		

**VERIFICATION SUMMARY**

PATENT APPLICATION: US/10/560,726

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Input Set : A:\21788wo.ST25.txt

Output Set: N:\CRF4\04142006\J560726.raw

L:9 M:270 C: Current Application Number differs, Replaced Current Application No

L:9 M:271 C: Current Filing Date differs, Replaced Current Filing Date